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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/532,140	04/20/2005	Hisayuki Kawamura	28955.4025	6207

27890 7590 07/25/2006  
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WASHINGTON, DC 20036

EXAMINER

KOSACK, JOSEPH R

ART UNIT PAPER NUMBER

1626

DATE MAILED: 07/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/532,140	KAWAMURA ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Joseph Kosack	1626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 08 June 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) 3-6 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-2 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

Claims 1-6 are pending in the instant application. An error was made in the previous action stating that claims 1-11 were pending. Only claims 1-6 have been presented thus far in the application, thus it should have read that claims 1-6 were pending in the previous action.

### ***Election/Restrictions***

Applicant's election with traverse of Group IV in the reply filed on June 8, 2006 is acknowledged. Applicant's arguments have been considered, but were not found to be persuasive.

The requirement is still deemed proper and is therefore made FINAL.

### ***Status of the Claims***

Claims 1-6 are pending in the instant application. Claims 1-2 (in part) and 3-6 (in full) are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

### ***Priority***

The claim to priority as a 371 filing of PCT/JP03/12977 filed on October 9, 2003 which claims priority to JP 2002-322545 filed on November 6, 2002 has been acknowledged in the instant application.

### ***Information Disclosure Statement***

The Information Disclosure Statement filed on April 20, 2005 has been considered fully by the Examiner.

### ***Claim Objections***

Claims 1-2 are objected to for containing elected and non-elected subject matter.

The elected subject matter have been identified supra.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-2 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

In the instant case, compounds of formula I are claimed to have a substituted or non-substituted aryl group having 6 to 50 nuclear carbon atoms, a substituted or non-substituted arylene group having 6 to 50 nuclear carbon atoms, a substituted or non-substituted condensed aryl group having 10 to 50 nuclear carbon atoms, a substituted or non-substituted heteroarylene group having 10 to 50 nuclear carbon atoms, a substituted or non-substituted alkylene group having 1 to 50 carbon atoms, a substituted or non-substituted alkylidene group having 2 to 50 carbon atoms, an ether bond, or a thioethers bond.

The specification fails to teach compounds covering the entire scope of the claimed invention. For example, there are no examples of a compound having a substituted or non-substituted arylene group having 50 nuclear carbon atoms. The

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largest aryl or arylene group visible to the Examiner from the specification contains 14 nuclear carbon atoms. Therefore, a person of skill in the art would deem that the Applicant did not possess the entire invention as claimed at the time of filing, and claims 1-2 do not meet the written description portion of 35 U.S.C. 112, first paragraph. Applicant is encouraged to limit the substituent groups to be consistent with those fully supported by the specification.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-2 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In the instant case, compounds of formula I are claimed to have a substituted or non-substituted aryl group having 6 to 50 nuclear carbon atoms, a substituted or non-substituted arylene group having 6 to 50 nuclear carbon atoms, a substituted or non-substituted condensed aryl group having 10 to 50 nuclear carbon atoms, a substituted or non-substituted heteroarylene group having 10 to 50 nuclear carbon atoms, a substituted or non-substituted alkylene group having 1 to 50 carbon atoms, a substituted or non-substituted alkylidene group having 2 to 50 carbon atoms, an ether bond, or a thioethers bond.

From the language used in the claims, it is not know what the boundary is between what Applicant considers to be the invention and what is not considered to be the invention. For example, a substituted or non-substituted aryl group having 6 to 50

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atoms is claimed. It is not known whether the 6 to 50 carbon atoms need to be part of a condensed ring system, multiple rings or ring systems connected by single bonds or linking groups, one ring with multiple substituents off of the ring where the total number of carbon atoms is between 6 to 50, one ring with multiple substituents off of the ring with the total number of carbon atoms of the ring system between 6 to 50 with as many atoms, including carbon, off of the ring system as desired, etc.... Therefore, claims 1-2 do not meet the requirements of 35 U.S.C. 112, second paragraph.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

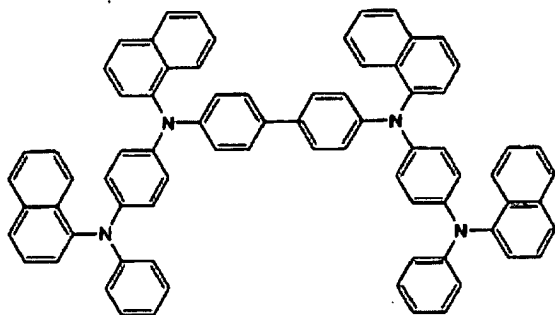
This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-2 rejected under 35 U.S.C. 103(a) as being unpatentable over Kawamura et al. (WO/00/14174 A1).

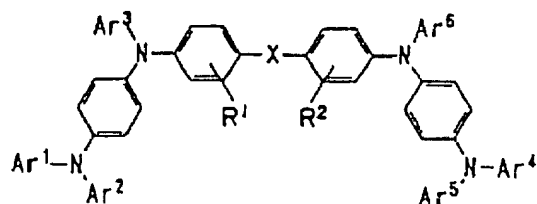
According to MPEP 2111.02, "If the body of a claim fully and intrinsically sets forth all of the limitations of the claimed invention, and the preamble merely states, for example, the purpose or intended use of the invention, rather than any distinct definition of any of the claimed invention's limitations, then the preamble is not considered a limitation and is of no significance to claim construction. *Pitney Bowes, Inc. v. Hewlett-Packard Co.*, 182 F.3d 1298, 1305, 51 USPQ2d 1161, 1165 (Fed. Cir. 1999)."

The instant invention cites a compound of the formula



Determination of the scope and content of the prior art (MPEP §2141.01)

Kawamura et al. teach a compound of formula



with substitutions as defined. See page 3.

Ascertainment of the difference between the prior art and the claims (MPEP §2141.02)

Kawamura et al. do not teach specifically the compound of the instant invention.

Finding of prima facie obviousness--rational and motivation (MPEP §2142-2413)

Kawamura et al. suggest the compound of the instant invention where Ar<sup>1</sup> through Ar<sup>6</sup> are aryl groups having from 6 to 24 nucleus carbon atoms, R<sup>1</sup> and R<sup>2</sup> are hydrogen atoms, and X is a single bond. See page 3.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the claimed invention was made to follow the synthetic scheme of Kawamura et al. to make the claimed invention. The motivation to do so is provided by Kawamura et al. Kawamura et al. teach the use of the compounds as a electroluminescent material with a small ionization potential and exhibits a large hole mobility when it is used as a layer or a zone. See page 2.

Thus, the claimed invention as a whole was *prima facie* obviousness over the combined teachings of the prior art.

**Double Patenting**

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory



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obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

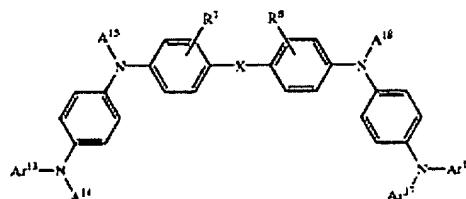
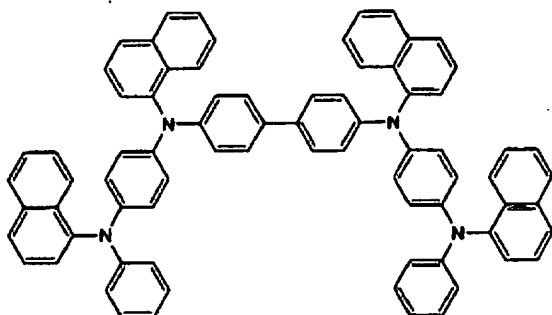
A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-2 rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 6,541,129. Although the conflicting claims are not identical, they are not patentably distinct from each other because both sets of claims are drawn to the same art specific subject matter.

According to MPEP 2111.02, "If the body of a claim fully and intrinsically sets forth all of the limitations of the claimed invention, and the preamble merely states, for example, the purpose or intended use of the invention, rather than any distinct definition of any of the claimed invention's limitations, then the preamble is not considered a limitation and is of no significance to claim construction. *Pitney Bowes, Inc. v. Hewlett-Packard Co.*, 182 F.3d 1298, 1305, 51 USPQ2d 1161, 1165 (Fed. Cir. 1999)."

The instant invention cites a compound of the formula



'129 teaches a compound of formula  
substitutions as defined.

with

'129 does not teach specifically the compound of the instant invention.

'129 suggests the compound of the instant invention where Ar<sup>13</sup> through Ar<sup>18</sup> are aryl groups having from 6 to 24 nucleus carbon atoms, R<sup>7</sup> and R<sup>8</sup> are hydrogen atoms, and X is a single bond.

Therefore, the compound of the instant invention is an obvious variant of the compounds of '129 since '129 teaches generally the claimed compound. Hence, '129 suggests the instant invention.

### **Conclusion**

Claims 1-2 are rejected. Claims 1-2 are objected to.

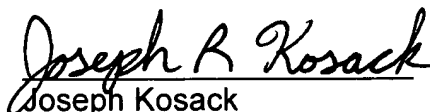
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Kosack whose telephone number is (571)-272-

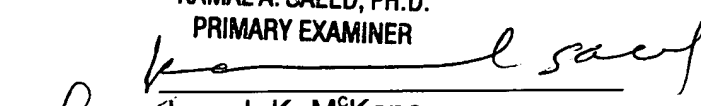
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5575. The examiner can normally be reached on M & W 5:30 A.M.-6:00 P.M. and T & Th 5:30 A.M.-2:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph McKane can be reached on (571)-272-0699. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
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